

Serial No. 10/646,390
Attorney Docket No. DKA-33545
Art Unit: 1647

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REMARKS

Entry of the amendments is respectfully requested. Claims 1, 7, and 24 are currently amended. No new claims have been added. Claims 1, 7, and 24 are pending in the application. Favorable reconsideration and allowance of this application is respectfully requested in light of the foregoing amendments and the remarks that follow.

1. Rejection Under § 112, First Paragraph

Claims 1, 7, and 24 were rejected under 35 U.S.C. § 112, ¶ 1, as failing to comply with the written description requirement.

Claims 1, 7, and 24 have been amended and are now believed to satisfy the written description requirement. In claims 1, 7, and 24, "homology" has been replaced with "identity over the entire sequence." Support for the insertion of "identity" can be found, e.g., in the last line of paragraph 0062 (for peptide sequences) and in paragraph 0094 (for nucleic acid sequences). Support for the insertion of "over the entire sequence" can be found in the above-referenced paragraphs and throughout the specification as originally filed. For example, in the last sentence in paragraph 0094, it states "identity to the relevant sequence shown in the sequence listings." Furthermore, the Sequence Listing displays the entire sequence of SEQ ID NOs: 1 and 2, and therefore, the relevant sequence referred to in this passage can be considered to be the entire sequence. As such, there is adequate written description support for the amended claims, and withdrawal of this rejection is requested.

2. Rejection Under § 103

Claim 1 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hayzer et al., Gene 117 (1992), 277-278 (Hayzer et al.). In particular, the Examiner states that the sequence disclosed therein, i.e., JC1241, is at least 90% "similar" to that of the present invention, and that the person of skill in the art would have considered isolating it.

While not acceding to the Examiner's suggestion, Applicants respectfully submit that the subject matter of amended claim 1 is not obvious in view of Hayzer et al. First, claim 1 has been amended to recite an isolated GCRI polypeptide that has "at least 90% *identity over its entire length* to the sequence set forth in SEQ ID NO: 2." The Examiner has already acknowledged, in the rejection under 35 U.S.C. § 102(b) of record (see Office Action dated October 19, 2005), that the sequence of JC1241 is less than 90% identical to SEQ ID NO: 2 over its entire length.

Serial No. 10/646,390
Attorney Docket No. DKA-33545
Art Unit: 1647

Therefore, irrespective of whether the person of skill in the art was motivated to isolate JC1241 on the basis of Hayzer et al. (which is in any case denied), [s]he would not have arrived at the invention of amended claim 1.

Secondly, the sequence of JC1241 as described in Hayzer et al., has no known function. However, the inventors of present application have shown that the polypeptide of SEQ ID NO: 2 is a specific marker for pluripotent cells (e.g., see paragraph 0071). In contrast, other known markers are not specific for pluripotent cells, as is described in the Examples. For example, Examples 2 and 4 note that although PGCs are identified in Example 2 by analysis of BMP4, TNAP, Hoxb1, and Oct4, no single one of these can be taken as a marker for the PGC state. However, both GCR1 and GCR2 may be used as such.

In Hayzer et al. there is no indication whatsoever that the sequences of the presently claimed invention would have the above-mentioned utility nor – as noted in the first point above – that the sequences of the present claims would, in fact, have any utility at all.

In light of the amendment to claim 1 and the foregoing arguments, withdrawal of the rejection of claim 1 is respectfully requested.

3. Amendment to the specification

The first paragraph of the specification has been amended to correct the reference to the related applications.

CONCLUSION

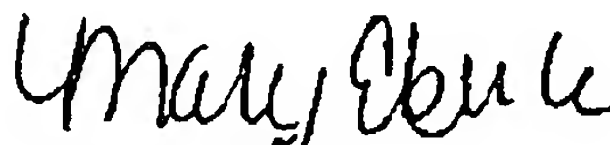
It is submitted that the pending claims are in compliance with 35 U.S.C. §§ 112 and 103 and each define patentable subject matter. A Notice of Allowance is therefore respectfully requested. No fee is believed to payable with this response. Nevertheless, the Director is authorized to charge Deposit Account No. 23-2053 for any fee associated with this response.

Serial No. 10/646,390
Attorney Docket No. DKA-33545
Art Unit: 1647

The Examiner is invited to contact the undersigned by telephone if it would help expedite matters.

Dated this 10th day of August, 2006.

Respectfully submitted,


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